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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/026,614	12/27/2001	Masashi Naito	KOKUSAI 086	9114
21254	7590	05/31/2006	EXAMINER	
MCGINN INTELLECTUAL PROPERTY LAW GROUP, PLLC 8321 OLD COURTHOUSE ROAD SUITE 200 VIENNA, VA 22182-3817			WONG, LINDA	
			ART UNIT	PAPER NUMBER
			2611	

DATE MAILED: 05/31/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

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Office Action Summary	Application No. 10/026,614	Applicant(s) NAITO ET AL.	
	Examiner Linda Wong	Art Unit 2611	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 February 2006.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3, 5, 7, 9 and 13-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) 1, 2 and 15-20 is/are allowed.
- 6) ☒ Claim(s) 5, 9 and 13 is/are rejected.
- 7) ☒ Claim(s) 3, 7, 14 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments

1. Applicant's arguments, see Applicant's Arguments, filed 2/28/2006, with respect to the rejection(s) of claim(s) 1-19 under Marchetto et al in view of Aizawa et al have been fully considered and are persuasive. Therefore, the rejection has been withdrawn.

Information Disclosure Statement

2. The information disclosure statement filed 2/28/2006 fails to comply with 37 CFR 1.98(a)(2), which requires a legible copy of each cited foreign patent document; each non-patent literature publication or that portion which caused it to be listed; and all other information or that portion which caused it to be listed. It has been placed in the application file, but the information referred to therein has not been considered. The examiner recognizes the IDS filed 5/6/2002 as indicated in the applicant's remarks was received, but a copy of the reference listed within the IDS was not found amongst the copies of the other references included. Please submit a copy of the reference so that the examiner may review the reference.

Claim Objections

3. **Claim 3** recites the limitation "said detection signal". There is insufficient antecedent basis for this limitation in the claim. There are 2 components that perform detection recited in the claim: 1) "a plurality of detecting means" And 2)

symbol pattern synchronizing means for reproducing symbol timing by detecting said symbol patterns ...” Please clarify the dependence of the phrase “said detection signal”.

4. **Claim 5** recites the limitation "said corresponding detection signals". There is insufficient antecedent basis for this limitation in the claim. The explanation to the “detection signal” described in the objection of claim 3 can also be used to clarify the objection of claim 5.
5. **Claim 9** recites the limitation "equalization processing". There is insufficient antecedent basis for this limitation in the claim. The previous components recited in the limitations do not recite an “equalization processing”.

Claim Rejections - 35 USC § 112

6. **Claims 5,9,13** are rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential structural cooperative relationships of elements, such omission amounting to a gap between the necessary structural connections. See MPEP § 2172.01. The omitted structural cooperative relationships are:
 - a. **Claim 5, lines 4-8**, recites the limitation “a plurality of detecting means for carrying out quadrature detection on the reception signals from said corresponding antennas; symbol pattern synchronizing means for reproducing symbol timing by detecting said symbol patterns based on said reception signal at the oversampling rate.” The limitations fails to recite a relationship between

the plurality of detecting means and symbol pattern synchronizing means with the equalizing means.

- b. **Claim 9, lines 7-8**, recites the limitation “a detecting step of carrying out quadrature detection on received signals from said corresponding antennas using a plurality of detecting means.” The limitations recited in the claim does not show a relationship between the detecting means and the rest of the components.
- c. **Claim 13, lines 9-13**, recites the limitation “wherein equalization processing ...” The claim fails to recite an equalizing component or some component in which “equalization processing” would occur, thus the recited limitation fails to show a relationship between the equalization processing and the rest of the components.

Allowable Subject Matter

- 7. **Claims 1-2,15,16,17,18,19,20** are allowed over prior art.
- 8. **Claims 3,5,9,13** would be allowable if rewritten or amended to overcome the objection(s) and/or rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action.
- 9. **Claims 7,14** are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Art Unit: 2611

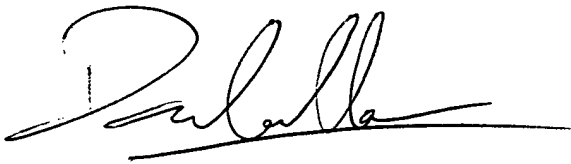
Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Linda Wong whose telephone number is 571-272-6044. The examiner can normally be reached on 9-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chieh Fan can be reached on (571) 272-3042. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Linda Wong

A handwritten signature in black ink, appearing to read 'Linda Wong', with a horizontal line underneath.

**DACHA
PRIMARY EXAMINER**